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ENERGY SUPPLY SECTOR GHG REDUCTION POLICY OPTIONS

CCAG MEETING #2, SEPTEMBER 29, 2005

<u>Indicative Potential Emission Reductions* -</u>	<u>Indicative cost (\$/tCO₂e)</u>
High (H): Potentially capable of saving at least 1 Million Metric Tons CO ₂ e per year by 2020 (~1% of current AZ emissions)	High (H): \$50/tCO ₂ e or above
Medium (M): Potentially capable of saving from 0.1 to 1 Million Metric Tons per year by 2020	Medium (M): \$5-50/tCO ₂ e
Low (L): Unlikely to yield more than 0.1 Million Metric Tons CO ₂ e per year by 2020	Low (L): \$5/tCO ₂ e or lower
Uncertain (U): Too many unknowns to estimate at this time	Negative (Neg): Cost Savings
* Several measures may overlap in terms of the emissions reductions. Estimates assume measures would be implemented independently from other measures.	

Indication of Priorities:

High: High priority items are deemed deserving of considerable further analysis.

Medium: Medium priority items will be carried forward, with the extent of further consideration and analysis to be determined later.

Low: Low priority items will be moved to a separate list as options to be potentially considered at a later time.

		Priority: High, Med, Low	Implement. Level & Lead	Potential Emission Reductions	Indicative Cost (\$/tCO ₂ removed)	Co-benefits, Feasibility Consideration
1.	Electricity Sector					
1.1	Renewable and Low Emitting Energy					
1.1.1	Renewable Portfolio Standard/Environmental Portfolio Standard (including consideration of an expanded EPS)	H		H	L/M	
1.1.2	Public Benefit Charge Funds	H		H	L/M	
1.1.3	Direct Renewable Energy Support: including Tax Credits and Incentives, R&D, and siting/zoning	H		L/M	M	
1.1.4	Green Power Purchases and Marketing	M		L/M – depends on technology & purchase level	L/M – depends on technolog y & purchase level	
1.1.5	Landfill Gas Recovery (see also Waste)	M		L	L	
1.2	Advanced Fossil Fuel Strategies					
1.2.1	Carbon Capture and Sequestration (CCS)	M		H	H	
1.2.2	Combined H ₂ /electricity production from fossil fuels with sequestration	M		H	H	
1.2.3	Advanced fossil technologies (e.g. IGCC)	M				
1.2.4	Fuel Cell Development Incentives	M		L	H	
1.2.5	Tax Credits and Incentives	M				
1.2.6	Research and Development (R&D)	M		U (L in short term)	U	
1.3	Other Electricity Measures					
1.3.1	Efficiency Improvements and Repowering Existing Plants	M		U	U	
1.3.2	Nuclear Plant Relicensing and Upgrading	M				

		Priority: High, Med, Low	Implement. Level & Lead	Potential Emission Reductions	Indicative Cost (\$/tCO2 removed)	Co-benefits, Feasibility Consideration
1.4	Distributed Generation					
1.4.1	Combined Heat and Power Incentive Policies and Barrier Reduction	M		M/H	L	
1.5	Emissions Policies					
1.5.1	GHG Cap and Trade	H		H	U	Issues with implementation level were raised; some TWG members want only a national cap & trade. Others expressed an interest in state or regional.
1.5.2	Generation Performance Standards	H		H	U	
1.5.3	Carbon Intensity Target	H		H	U	
1.5.4	GHG Offset/mitigation requirements for new power plants	H				
1.5.5	GHG Offset/mitigation requirements for existing power plants	H				
1.5.6	Voluntary Utility CO2 Targets and/or Trading	H		U	U (typically L)	Some TWG members expressed that utilities are now able to set voluntary targets without any policy, so there is no need to explore this as an option.
1.5.7	CO2 Tax	H		L to H	L to H – depends on tax level	
1.5.8	Environmental dispatch	M		H	H	
1.6	Grid and Utility Policies					
1.6.1	Interconnection Rules for clean, distributed generation*	H		U	U	
1.6.2	Remove Transmission and Other Barriers for Renewable and other Clean DG*	H		U	U	
1.6.3	Net Metering	H		U	U	
1.6.4	Pricing and metering strategies	H				
1.6.5	Remove Utility Rate Barriers	H				
1.6.6	Advanced Metering	H				

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1.6.7	Time-of-use Rates	H		U	U	CEC estimates 3 – 12% reduction in peak demand as result, emissions outcome ambiguous
1.6.8	Load Management (no clear GHG savings)	H		U	U	
1.6.9	Transmission System Upgrading	H		U	U	
1.6.10	Reduce Transmission and Distribution Line Loss	H		U	U	
1.7	Education and Awareness					
1.7.1	Brownfield Re-development	M		U	U	
1.7.2	Environmental (emissions) Disclosure	H		U	U	
1.7.3	Public Education	H		U	U	

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2.	Other Energy Supply					
2.1	Natural Gas System					
2.1.1	Leak reduction program	H				
2.2	Hydrogen					
2.2.1	Incentives for hydrogen development	M				